Some Typical Conversions to Wavelength

X-rays and gamma-rays: converting from energy (ev, keV, MeV) to wavelength (μm):

$\lambda = 1.241 / E$
where λ is wavelength in μm, E is energy in eV.

$\lambda = (1.241 \times 10^{-3})/E$
where λ is wavelength in μm, E is energy in keV.

$\lambda = (1.241 \times 10^{-6})/E$
where λ is wavelength in μm, E is energy in MeV.

$\lambda = (1.241 \times 10^{-9})/E$
where λ is wavelength in μm, E is energy in GeV.

The above expressions are derived from the equation

$$\lambda = h\,c/E,$$

where λ = wavelength, h = Planck's constant, c = speed of light, and E = energy.

They are to be used only for electromagnetic waves (UV, X-rays, gamma-rays), not for particles (protons, neutrons, electrons, etc.).

Infrared: converting from wavenumbers (cm^{-1}) to wavelength (μm):

$\lambda = 10^4/k$
where λ is wavelength in μm, k is wavenumber in cm^{-1}.

Miscellaneous:

1 μm (micrometer or micron) = 10^{-6} m

1 nm (nanometer) = 10^{-9} m

1 A (angstrom) = 10^{-10} m (seldom used)

Converting wavelength in nm to μm:
$\lambda\ (\mu m) = 10^{-3} \times \lambda\ (nm)$